Important Advances in Clinical Medicine

Epitomes of Progress -- Neurology

The Scientific Board of the California Medical Association presents the following inventory of items of progress in Neurology. Each item, in the judgment of a panel of knowledgeable physicians, has recently become reasonably firmly established, both as to scientific fact and important clinical significance. The items are presented in simple epitome and an authoritative reference, both to the item itself and to the subject as a whole is generally given for those who may be unfamiliar with a particular item. The purpose is to assist the busy practitioner, student, research worker or scholar to stay abreast of these items of progress in Neurology which have recently achieved a substantial degree of authoritative acceptance, whether in his own field of special interest or another.

The items of progress listed below were selected by the Advisory Panel to the Section on Neurology of the California Medical Association and the summaries were prepared under its direction.

Reprint requests to: Division of Scientific and Educational Activities, 693 Sutter Street, San Francisco, Ca. 94102.

Bloody Tap and Yellow Peril

BLOODY CEREBROSPINAL FLUID (CSF) sometimes poses a problem to the clinician trying to assess the probability of an intracranial hemorrhage, whatever the pathological source. It is commonly known that clearing of the blood from the second and third tubes suggests traumatic technique (usually from puncture of the *anterior* epidural vessels). It is not so commonly known, however, that even should clearing not occur, there are further steps which can differentiate quickly between a spontaneous or pathologic hemorrhage which occurred more than 4 to 12 hours before to lumbar puncture and traumatic puncture technique. Those steps are to centrifuge the CSF (an ordinary centrifuge designed for urine and blood work is adequate) and examine the supernatant for bilirubin and protein. Xanthochromia of the supernatant CSF with protein less than 200 mg per 100 ml may be construed as proof of hemorrhage more than 4 to 12 hours previously. If bilirubin is shown to be present by Ictotest or other appropriate technique (the tests otherwise used for urine are acceptable), then hemorrhage has been proved regardless of the protein level. Even in a jaundiced patient, this test is of value since conjugated bilirubin does not cross the intact blood brain barrier. Purists may wish to show that the CSF bilirubin concentration exceeds at least that of serum unconjugated bilirubin.

If the supernatant CSF is red or orange, it is still possible that bilirubin may be demonstrated by appropriate chemical tests to prove previous